



Bison Oil Well Cementing Tail & Lead

Date: 10/14/2018
Invoice #: 200353
API#
Foreman: Kirk Kallhoff

Customer: Noble Energy Inc.
Well Name: Wells Ranch bb 09-639

County: Weld
State: Colorado
Sec: 8
Twp: 5N
Range: 62W
Consultant: jim
Rig Name & Number: H&P 321
Distance To Location: 27
Units On Location: 4028/4030/4024
Time Requested: 400 am
Time Arrived On Location: 130 am
Time Left Location:

WELL DATA

Casing Size (in) : 9.625
Casing Weight (lb) : 36
Casing Depth (ft) : 1,920
Total Depth (ft) : 1965
Open Hole Diameter (in) : 13.50
Conductor Length (ft) : 110
Conductor ID : 15.15
Shoe Joint Length (ft) : 37
Landing Joint (ft) : 35

Sacks of Tail Requested 100
HOC Tail (ft): 0

One or the other, cannot have quantity in both

Max Rate: 8
Max Pressure: 2500

Cement Data

Lead
Cement Name: BFN III
Cement Density (lb/gal) : 13.5
Cement Yield (cuft) : 1.68
Gallons Per Sack 8.90
% Excess 15%

Tail Type III
Cement Name:
Cement Density (lb/gal) : 15.2
Cement Yield (cuft) : 1.27
Gallons Per Sack: 5.80
% Excess: 0%

Fluid Ahead (bbbls) 30.0
H2O Wash Up (bbbls) 20.0

Spacer Ahead Makeup
30 BBL ahead with Die in 2nd 10

Casing ID

8.921

Casing Grade

J-55 only used

Lead Calculated Results

HOC of Lead 1548.00 ft
Casing Depth - HOC Tail
Volume of Lead Cement 756.55 cuft
HOC of Lead X Open Hole Ann
Volume of Conductor 82.12 cuft
(Conductor ID Squared) - (Casing Size OD Squared) X (.005454) X
(Conductor Length ft)
Total Volume of Lead Cement 838.68 cuft
(cuft of Lead Cement) + (Cuft of Conductor)
bbbls of Lead Cement 171.77 bbbls
(Total cuft of Lead Cement) X (.1781) X (1+%Lead Excess)
Sacks of Lead Cement 574.09 sk
(Total Slurry Volume) ÷ (Cement Yield) X (% Excess Cement)
bbbls of Lead Mix Water 121.65 bbbls
(Sacks Needed) X (Gallons Per Sack) ÷ 42
Displacement 148.26 bbbls
(Casing ID Squared) X (.0009714) X (Casing Depth) + (Landing Joint) - (Shoe Length)
Total Water Needed: 333.72 bbbls

Tail Calculated Results

Tail Cement Volume In Ann 127.00 cuft
(HOC Tail) X (OH Ann)
Total Volume of Tail Cement 110.94 Cuft
(HOC Tail X OH Ann) - (Shoe Length X Shoe Joint Ann)
bbbls of Tail Cement 22.62 bbbls
(HOC of Tail) X (OH Ann) + (Cement Yield) X (Shoe Joint Ann) X (.1781) X (% Excess)
HOC Tail 227.00 ft
(Tail Cement Volume) ÷ (OH Ann)
Sacks of Tail Cement 100.00 sk
(Total Volume of Tail Cement) ÷ (Cement Yield)
bbbls of Tail Mix Water 13.81 bbbls
(Sacks of Tail Cement X Gallons Per Sack) ÷ 42
Pressure of cement in annulus
Hydrostatic Pressure 585.23 PSI
Collapse PSI: 2020.00 psi
Burst PSI: 3520.00 psi

X

Authorization To Proceed

X 10-14-88
Date

SERIES 2000


